

Wasco Riparian Buffer Project

Annual Report
2003 - 2004



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WASCO RIPARIAN BUFFER PROJECT
BPA CONTRACT NO. 00009502
PROJECT NO. 2002-019-00

ANNUAL REPORT
FOR THE PERIOD May 1, 2003 TO April 30, 2004

Prepared for

Bonneville Power Administration

by

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ABSTRACT

This project implements riparian buffer systems in the Mid-Columbia, addressing limiting factors identified in the Deschutes River Sub-basin Summary, March 2, 2001. This project is providing the technical planning support needed to implement at least 20 riparian buffer system contracts on approximately 800 acres covering an estimated 36 miles of anadromous fish streams. During this second year of implementation, 17 buffer contracts were established on 173,462 ft. of stream (25.9 miles). Acreage included in the buffers totaled 891.6 acres. Average buffer width was 112 ft. on each side of the stream. Cumulative totals through the first two project years are 26 buffers on 36.6 stream miles covering 1,283.6 acres.

Actual implementation costs, lease payments, and maintenance costs will be borne by existing USDA programs: Conservation Reserve (CRP) and Conservation Reserve Enhancement Programs (CREP). The lease period of each contract may vary from 10 to 15 years. During this year, the average lease period was 14.9 years. The total value of contracts established this year is \$1,421,268 compared with \$55,504 in BPA contract costs to provide the technical support needed to get the contracts implemented. Cumulative contract value for the first two years is \$1,919,451 compared to \$103,329 cost to BPA.

This project provides technical staffing to conduct assessments and develop conservation plans required for riparian buffer systems to help keep pace with a growing backlog of potential buffer projects. This project meets a critical need in the lower Deschutes and lower John Day River basins and complements the Riparian Buffer project approved for Fifteenmile watershed, Project No. 2001-021-00 begun in fiscal year 2001.

This project supports RPA 150 and 153 as required under the Federal Hydropower System biological opinion and benefits the mid-Columbia ESU of steelhead.

Introduction

Wasco County SWCD provides local leadership in implementation of several full-scale watershed enhancement projects focused on improving watershed health. Working in close partnership with NRCS, our team's strength is our ability to develop and implement scientifically sound, economically feasible resource management plans for private landowners.

This project to implement riparian buffer systems in the Mid-Columbia addresses limiting factors identified in the Deschutes River Subbasin Summary, March 2, 2001. It provides for the technical planning support needed to implement at least 20 riparian buffer system contracts on approximately 800 acres covering an estimated 36 miles of

anadromous fish streams. Buffer widths range between 35 and 180 ft. on each side of the stream. Implementation included prescribed plantings, fencing, off-stream water developments and related practices. Actual implementation costs, lease payments, and maintenance costs are borne by existing USDA programs: Conservation Reserve (CRP) and Conservation Reserve Enhancement Programs (CREP). Lease periods are for 10-15 years. This program meets a critical need in the lower Deschutes and lower John Day River basins. This project helps provide technical support to conduct assessments and develop plans enabling the growing backlog of applications for the buffer program to be addressed.

Description of Project and Project Area

Fish production in most of the lower Deschutes River subbasin is limited by water quality and quantity. Habitat problems identified as limiting steelhead and redband trout production in the tributary streams such as Buck Hollow, Bakeoven, Trout, and Shitike Creeks include low stream flow, unstable stream banks, inadequate stream shading, shallow pools, elevated water temperature, low amount of pool habitat, and gravel impacted by fine sediment. (Nelson, 2001. Deschutes River Subbasin Summary).

Channel degradation, due in part to over 100 years of livestock impacts on riparian vegetation in combination with damaging flood events, has resulted in the habitat problems we see today. Wide, shallow channels, lack of pools and lack of healthy riparian plant communities, particularly the shortage of the woody component, all contribute to the water quality and quantity problems. These problems can be solved with riparian buffer systems.

Buffers filter sediment and nutrients, stabilize stream banks, improve fish habitat, and provide food sources, nesting cover and shelter for wildlife. They provide shade, reduce heating rates in summer, and over time are expected to help narrow degraded stream channels. More details on buffers and their effects can be found in a fact sheet at the Conservation Technology Information Center (CTIC) website: www.ctic.purdue.edu/Core4/news/annc/Bufferfact.html or at the Natural Resources Conservation Service (NRCS) web site: www.nhq.nrcs.usda.gov/CCS/Buffers.html.

The CREP and CRP continuous sign-up offer an opportunity to create riparian buffer systems and directly address these water quality and habitat limitations. Details about these programs are available at local USDA Service Centers and in the Catalog of Federal Domestic Assistance (CFDA) #10.069, accessible on the internet at www.cfda.gov. Both programs offer 10-15 year leases to landowners to create 35-180 ft. buffers along both sides of the stream. In addition to cost sharing fencing, off-stream water developments, and establishment of perennial vegetation, per-acre rental rates enable participating landowners to derive income from the buffers they establish under the programs, encouraging wider buffers.

This project to develop and implement CRP/CREP riparian buffer plans directly supports many of the goals, objectives, and strategies identified in the Deschutes River Subbasin Summary (pages 105-158) as well as the problems identified in the “Habitat Areas and Quality-Lower Deschutes River” (pages 35-36). Riparian buffer systems address several specific fish and wildlife needs cited in the subbasin summary under habitat enhancement and protection and include: (a) development of off-stream water and (b) restoration of riparian vegetative corridors through riparian buffer systems.

This project to implement riparian buffer systems supports the NWPPC Fish and Wildlife Program (1994) Habitat Goal, Policies and Objectives described in Section 7.6, particularly 7.6B.1 helping private parties be proactive and 7.6B.3 integration of habitat work in broader watershed improvement efforts. Section 7.6B.4 recommends higher priority for actions that maximize effect for the dollar. Given that this proposal seeks funding to make technical assistance available and a modest amount for implementation, with other entities picking up nearly all the implementation and lease costs, it shows outstanding leveraging of funds. The project supports the provisions of 7.6C for Coordinated Habitat Planning. Establishment of Riparian Buffers clearly supports actions identified in section 7.6D to reduce sediment, improve bank stability, and water quality. Tree establishment in riparian buffers helps stabilize banks, provide shade, and reduce heating rates on hot summer days. Direct planning with private landowners supports the concepts discussed in Section 7.7.

This project supports several objectives of the ODFW Lower Deschutes River subbasin Management Plan: (7) Improve the quality and quantity of riparian habitat; (9) Maintain or improve water quality in the lower Deschutes River and tributaries.

It supports specific Wasco County SWCD Strategies in the Deschutes Basin: Buck Hollow Watershed strategy 2.1, Work with private landowners on implementation of riparian buffer systems to accelerate shading of degraded reaches, vegetative stabilization of riparian areas, and reduction in stream width/depth ratios, and corresponding reduction in thermal inputs during summer. Bakeoven Watershed strategy 1.1 Work with private landowners to establish riparian buffer systems on Bakeoven and Deep Creeks. White River Watershed Strategy 1.3 Work with private landowners to implement riparian buffer systems.

Riparian buffers address two of four objectives found in The Lower Deschutes Agricultural Water Quality Management Area Plan (2000) (2) achieve stable stream banks and (4) provide adequate riparian vegetation for stream bank stability and stream shading consistent with site capability.

The Tribes' Anadromous Fish Restoration Plan, Wy-Kan-Ush-Mi Wa-Kish-Wit, p.35 identifies 7 actions of which 2 are directly addressed by establishing riparian buffers: Action 6. Protect and enhance aquatic and riparian habitat; Action 9. Increase stream bank cover, decrease water temperatures during the summer and increase stream flow.

National Marine Fisheries Service Biological Opinion for the Federal Columbia River Hydropower System identifies a reasonable and prudent alternative (Action#153) to use incentive programs such as CREP for long term protection of 100 miles riparian buffers per year. This project helps satisfy RPA Action #153.

ESA section 7 consultation has been completed on the CREP program (NMFS, 1999). That biological opinion is scheduled for its 5 year review in June 2004. The CREP program is an integral part of the Oregon Plan for Salmon and Watersheds. The key elements of the Oregon Plan are coordinated agency programs, local community involvement and actions, monitoring progress, and adaptive management. This proposal supports those main elements of the Oregon Plan.

This project complements the Riparian Buffer project approved for Fifteenmile watershed for fiscal year 2001. Collaborative efforts are expected between technicians assigned to the two areas. It supports the Bakeoven Watershed riparian restoration needs identified in the Bakeoven Riparian assessment. It is supported in part by the proposed Assessment/watershed coordination project which can help establish priorities within individual watersheds for targeting riparian buffer promotion and technical assistance.

Methods and Materials

The following table presents the project's objectives, tasks, and methods to implement the tasks.

OBJECTIVE	TASK	METHOD
1. Ensure overall project coordination maintains high level of agency and landowner participation, avoids overlaps, and duplication of effort, identifies and resolves issues as they occur.	1.1 Coordinate project activities with participating agencies.	Consolidated listing of potential CREP contracts from multiple sources including FSA sign-up list, Wasco Co. SWCD contacts, and ODFW reach priorities. Most coordination on this project involves SWCD, USDA NRCS and Farm Services Agency. Coordination with BLM Prineville is required for southern Wasco County rangeland areas where BLM parcels are interspersed with private lands.
	1.2 Track and report progress on streams protected by buffers in such format as may be required to support BPA ESA reporting requirements.	Several general reports were called for during the year and culminated with numerous RPA 153 metrics forms which entailed determination of LAT LON for beginning and end of each buffer contract reach along with length, acreage, HUC and other data.
2. Implement at least 20 new CRP/CREP riparian buffer system agreements with participating landowners on 36 miles of stream to improve 800 riparian acres	2.1. Meet with interested landowners on site and assess eligibility of stream reach for program.	A variety of outreach methods are used to generate interest in the program. They include annual series of neighborhood meetings, bimonthly newsletter articles, and word of mouth. When a landowner expresses interest, a technician visits the site and checks condition of ground cover, shrub, and tree components and width of the existing vegetation zone. If potential exists to make improvements, the landowner is encouraged to sign up for the program.

OBJECTIVE	TASK	METHOD
	2.2. Obtain landowner sign up for program	After eligibility determination in task 1.a., preliminary estimates are made of cost share and incentive payments available for establishing a buffer and provided to the landowner. A general program overview is also presented and any questions the landowner may have are answered, at which time the landowner decides whether or not to sign up. USDA Farm Services Agency then takes the signup, setting the stage for plan development.
	2.3. Develop CRP / CREP plan for review and approval, including planting prescriptions, fencing design, water developments other practices as needed.	USDA NRCS national planning procedures are followed for the first 7 of the 9 step planning process. They include 1. Identify problems and opportunities; 2. Determine objectives; 3. Inventory Resources; The NRCS Stream Visual Assessment Protocol is completed during the inventory. Quality criteria from the Field Office Technical Guide are examined for each resource concern to assess current conditions; 4. Analyze resource inventory; 5. Formulate Alternatives; 6. Evaluate alternatives; 7. Decision or Alternative selection. Documentation of the decision completes the plan development process. The plan is then reviewed, approved and signed by USDA NRCS District Conservationist, the landowner, and the SWCD Board of Directors. Once the plan is completed and approved, a contract is made between Farm Services Agency and the landowner to implement the plan.
	2.4. Enter into protective conservation agreements with landowners to protect stream contiguous to eligible buffer sites for reaches not otherwise fundable by CRP / CREP or to implement needed practices not otherwise fundable under the program.	Conservation agreements are developed with participating landowners for any work outside the scope of the USDA contract. This particular task has not been required to date in this project but enables maintaining the integrity of longer buffer systems in those cases where short reaches in a longer reach would be ineligible for USDA funding or to implement practices necessary to achieve success in cases where those additional practices are not fundable by USDA.
	2.5. Complete plan documentation and progress reporting.	Appropriate documentation in the producer file is completed by the planner, and progress reporting is done. Implementation is funded in part by state of Oregon (25%), in part by USDA (50%), and in part by the landowner (25%). The landowner portion may be in cash or in-kind. Documentation of contract costs is done to support reporting requirements.

OBJECTIVE	TASK	METHOD
3. Ensure availability of technical assistance as needed during buffer implementation	3.1 Provide technical assistance during implementation as necessary	This task consists of staking out fence lines, planting areas, instructing landowners or their crews on planting methods, fencing, etc. as needed so that the practices are properly implemented. (Note: Implementation is step 8 of the 9 step planning process)
4. Implement additional conservation practices or protective measures needed to protect high quality riparian areas in good condition.	4.1 Provide 75% cost share for conservation practices identified in Task 2.4 to include minimal incentives or extra conservation practices needed to ensure successful implementation or to protect existing good habitat.	As explained in the methods section for task 2.4 above, no additional practices have been required to date and therefore under this task, no cost share has been provided.
5. Verify that installed practices are functioning according to plan	5.1 Inspect riparian protective measures cost shared under task 4.1 annually for continuing functionality and effectiveness.	This Monitoring and Evaluation of installed systems is part of step 9 and the final step of the planning process. Evaluation is done to confirm if objectives are being met. If so the plan continues to be implemented. If, however, objectives are not being met then an adaptive management process begins which includes formulating additional alternatives (step 5 of the planning process) This objective and task are tied to Objective 4 and similarly, has not yet been invoked for this project. The USDA programs have covered all needed practices to date.

Operation and Maintenance are not required in this project. Actual operation and maintenance is a funded item in the CRP/CREP contracts whereby the landowner receives a small fee per acre to cover maintenance costs. The landowner is responsible under the contract for the maintenance.

Monitoring and Evaluation under this project consists of annual inspection of additional practices cost shared outside the existing CRP/CREP programs. USDA has programmatic responsibility for spot checking CREP/CRP contracts to ensure terms are being met. NRCS has responsibility for technical supervision.

Our technicians use the USDA Natural Resources Conservation Service Stream Visual Assessment Protocol to evaluate riparian conditions during site assessments as part of the planning process. By doing so they establish documentation of baseline, pre-project conditions. Given the repeatability of that assessment, it may be prudent to consider repeating the stream visual assessment at some future time after the buffer system has been implemented and the riparian area has had a chance to respond. Establishment of a photo point and repeating the assessment would be a relatively inexpensive way to measure success in habitat improvement at least to Tier One levels and would add some measure of effectiveness.

Results and Discussion

Progress in executing riparian buffer contracts has met expectations. Goal for project was 20 contracts over three years or 6.7 contracts per year. During this second project year, 17 contracts were established for 254% of goal. Those contracts for the project were expected to include about 36 miles of riparian buffers or about 12 miles per year. Miles of riparian buffer systems enrolled this year was 25.9 or 216% of the annual goal.

Total value of contracts established for this second year was \$1,421,268, which includes actual expenses and obligated amounts through the life of the buffer contracts established. Total BPA contribution for this project year was \$55,504 for a ratio of 25:1. This represents significant leveraging of BPA funds.

Summary and Conclusions

This project has been highly successful to date. It would benefit by adding some level of effort for tier one monitoring using photo points and the NRCS Stream Visual Assessment Protocol to determine changes in riparian conditions.

Summary of Expenditures

(each item rounded to nearest dollar)

Personnel Salaries	\$ 32,653
Benefits & other pers. exp.	\$ 9,796
Office & field supplies	\$ 631
Vehicle lease costs	\$ 5,095
Vehicle operations costs	\$ 2,283
Field Implementation	\$ 0
Travel	\$ 0
Administrative Overhead	\$ 5,046
Total contract Expenditures	\$ 55,504

Total USDA, State, Landowner Implementation and Contract Costs: \$1,421,268